WHAT IS CLAIMED IS:

1. A constant-power brushless DC motor, comprising:

a stator which is wound in parallel by phases and polarities and configured of n multi-phases, each of the winding coils of the stator which are not connected with one another is connected to each of n full H-bridges, n full H-bridges are connected to a DC power supply in parallel;

a rotor having a predetermined number of polarities, which is required to concentrate magnetic flux on excitation area;

a commutation encoder including sensing regions and nonsensing regions, the commutation encoder being externally set to one side of the shaft of the rotor; and

two photo sensors set to each phase, the two photo sensors being connected to half H-bridge of each phase, to turn on/off the half H-bridge, the distance between the sensing regions of the commutator encoder is determined to allow a phases among n phases to be excited all the time, the a photo sensors recognizing the a phases excited.

2. The motor as claimed in claim 1, wherein the stator has narrow slots to remove cancel phenomenon.

3. The motor as claimed in claim 3, wherein the number of phase among the n phases, which will be excited, is determined by the distance between the sensing regions, the distance between the sensing regions being determined through the following expression,

distance between sensing regions

= (2π x number of phases to be excited)/(number of polarities of rotor x number of phases of motor) (°)

the number of sensing regions in the commutation

encoder being determined through the following expression,

number of sensing regions

= (number of polarities of rotor)/2

the distance between the photo sensors on a sensor plate being determined by the following expression,

distance between photo sensors

= 2π/(number of polarities of rotor x number of phases of motor) (°)

among the n phases, a phases being excited but b phases not being excited all the time.

4. The motor as claimed in claim 3, wherein b≥1, b corresponding to the number of phases inexcited.